

CLAIMS:

What is claimed is:

1. A method of generating and inserting an indicator into a video stream comprising:
 - generating a time code signal that corresponds to video signal address of said video stream;
 - generating said indicators at an end-user site and storing said indicators in an database;
 - accessing said indicators that are stored in said database in response to said time code signal at said video signal address;
 - encoding said video stream with said indicators.
2. The method of claim 1 wherein said step of encoding said video stream with indicators comprises encoding said video stream with content indication tags.
3. The method of claim 1 wherein said step of encoding said video stream with indicators comprises encoding said video stream with segment division markers.
4. The method of claim 1 wherein said step of generating said indicators is performed by video recognition of content of said video stream.
5. A system for encoding a video stream with indicators comprising:
 - a time code generator that generates a time code signal;
 - an indicator generator that generates said indicators of said video stream;
 - a database having said indicators stored therein that generates an indicator signal in response to said time code signal;
 - an encoder that encodes said video stream with said indicator signal to generate a video stream encoded with said indicators.
6. The method of claim 5 wherein said indicators are content indication tags.
7. The method of claim 5 wherein said indicators are segment division markers.
8. A method of generating and inserting an indicator into a time encoded video stream comprising:
 - extracting a time code from said time encoded video stream that corresponds to a video signal address of said time encoded video signal;

5 generating said indicators at an end-user site and storing them in a database;

accessing said indicators that are stored in said database in response to said time code signal at said video signal address;

encoding said time encoded video stream with said indicators.

9. The method of claim 8 wherein said step of encoding said time encoded video stream with indicators comprises encoding said time encoded video stream with content identification tags.

10. The method of claim 8 wherein said step of encoding said time encoded video stream with indicators comprises encoding said time encoded video with segment division markers.

11. The method of claim 8 wherein said step of generating said indicators is performed by video recognition of the content of said video stream.

12. A method of generating and inserting indicators into a time encoded video stream comprising:

5 extracting a time code from said time encoded video stream that corresponds to a video signal address of said time encoded video signal and generating a video signal;

generating said indicators at an end-user site and storing said indicators in an database;

accessing said indicators that are stored in said database in response to said time code signal at said video signal address;

10 encoding said video signal with said indicators.

13. The method of claim 12 wherein said step of encoding said video signal with indicators comprises encoding said video signal with content identification tags.

14. The method of claim 12 wherein said step of encoding said video signal with indicators comprises encoding said video with segment division markers.

15. The method of claim 12 wherein said step of generating said indicators is performed by video recognition of the content of said video stream.

16. A system for inserting indicators in a time encoded video stream comprising:

a time code reader that reads a time code from said time encoded video stream;

an indicator generator that generates said indicators of said video stream;

5 a database having said indicators stored therein that generates an indicator signal in response to said time code signal;

an encoder that encodes said time encoded video stream with said indicator signal to generate a time and indicator encoded video stream.

17. A method of manually inserting indicators in a video stream comprising:

displaying said video stream to an operator;

delaying said video stream to generate a delayed video stream;

displaying said delayed video stream to said operator;

5 inserting indicators at desired locations in said delayed video stream based upon information viewed in said video stream.

18. The method of claim 17 wherein said step of inserting indicators further comprises:

inserting standard indicators stored in a database using an operator input station.

19. The method of claim 17 wherein said step of inserting indicators comprises inserting content identification tags.

20. The method of claim 17 wherein said step of inserting indicators comprises inserting segment division markers.

21. A system for manually inserting indicators in a video stream comprising:

5 a first display that displays said video stream to an operator;

a delay that generates a delayed video signal;

a second display that displays said delayed video signal to said operator;

an operator input station under the control of said operator that inserts said 5 indicators in said delayed video signal based upon information viewed in said video stream.

22. The system of claim 21 further comprising:

a database coupled to said user input station that provides standard content identification tags segment division and markers for insertion into said video stream.

23. A method of automatically inserting indicators in a video stream comprising:

- splitting said video stream;
- delaying one portion of said split video stream to generate a delayed video stream;
- 5 analyzing the other portion of said split video stream with a video recognition device;
- generating a content identification signal for said analyzed video stream;
- generating segment division markers for said analyzed video stream;
- comparing the said content identification signal to a database of standard content identification tags;
- 10 assigning said tags to matching said signals;
- resynchronizing said assigned tags and markers with said delayed video stream;
- encoding said delayed video stream with said tags and markers.

24. A system for automatically inserting indicators in a video stream comprising:

- a splitter for splitting said video stream;
- a delay that generates a delayed video signal for one portion of said split video;
- 5 a video recognition analyzer that analyzes the other portion of said split video stream to generate a content identification signal and segment division markers for said analyzed video stream;
- a database of standard content identification tags;
- 10 a comparator for said content identification signal to assign said database standard content identification tags to matching said content identification signals;
- a time synchronizer to resynchronize said assigned tags and markers with said delayed video stream;
- an encoder to encode said delayed video stream with said tags and markers.

25. A method of generating a combined video signal in response to an indicator encoded in a video stream comprising:

extracting said indicator from said video stream;

decoding said indicator to generate an access signal;

using said access signal to access a supplemental video signal stored in a database;

combining said supplemental video signal with said video stream to generate said combined video signal.

26. The method of claim 25 wherein said step of combining further comprises combining said supplemental video signal as an overlay of said video stream.

27. The method of claim 25 wherein said step of combining further comprises generating a combined video signal in which said supplemental video appears on different portions of a display than said video stream.

28. The method of claim 25 wherein said supplemental video signal comprises local advertising.

29. The method of claim 25 wherein said supplemental video signal comprises a weather alert.

30. The method of claim 25 wherein said supplemental video signal comprises sports scores.

31. A system for generating a combined video signal in response to indicators provided in a video stream comprising:

a decoder that is connected to receive said video stream and separates said indicators from said video stream to produce an indicator signal and a video signal;

a database that stores supplemental video and generates a supplemental video signal in response to said indicator signal;

a video combiner that combines said video signal and said supplemental video signal to produce said combined video signal.

32. The system of claim 31 further comprising an indicator decoder connected to said decoder that generates an access signal in response to said indicator signal and applies said access signal to said database.

33. A method of generating an enhanced video signal in response to an indicator encoded in a video stream comprising:

extracting said indicator from said video stream;

using said indicator to access an Internet web site and producing a web site signal;

encoding said video stream with said web site signal;

extracting said web site signal and a video stream from said video stream;

decoding said web site signal to generate a supplemental video signal;

combining said supplemental video signal and said video signal to generate said enhanced video signal.

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34. The method of claim 33 wherein said step of combining further comprises combining said supplemental video signal as an overlay of said video signal.

35. The method of claim 33 wherein said step of combining further comprises generating an enhanced video signal in which said supplemental video signal appears on different portions of a display than said video signal.

36. The method of claim 33 wherein said step of using said indicator further comprises:

decoding said indicator to generate a database address signal;

using said database address signal to access an Internet address stored in a database;

accessing an Internet web site using said Internet address.

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37. A system for generating an enhanced video signal in response to indicators provided in a video stream comprising:

a decoder that is connected to receive said video stream and that separates said indicators from said video stream;

an Internet connection that accesses an Internet address in response to said indicators;

an Internet information decoder that decodes Internet information accessed at said Internet address and that generates a supplemental video signal;

a combiner that combines said supplemental video signal and said video stream to generate said enhanced video signal.

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38. The system of claim 37 further comprising:
an Internet information encoder that encodes said Internet information with
said video stream.
39. The system of claim 37 wherein said Internet connection is provided through a
cable head-end.
40. The system of claim 37 wherein said Internet connection is provided as a
direct connection from a set-top box to an Internet service provider.